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# SMOKEHOUSES and Hog Slaughtering Equipment



Issued September 1943

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CONVENIENT AND LOW-COST facilities for slaughtering hogs and smoking meat on the farm will relieve the consumer demand on war-congested commercial plants and reduce the burden on transportation systems.

## SMOKEHOUSES

Many types of smokehouses are used successfully to improve the color, flavor, and keeping qualities of cured meat. These houses range from the temporary "one-hog" type made from a 50-gallon barrel to permanent structures suitable for both smoking and storing meat. The drawings show enough details, so that blueprints will not be required by the builder.

Smokehouses should be of reasonably tight construction to permit easy regulation of temperature and flow of smoke and air. A rapid flow of air past the meat is needed at the beginning of the smoking operation, to drive off surplus moisture. Less rapid air movement near the end of the smoking period prevents excessive shrinkage in the weight of the meat. A temperature of 90° to 120° F. is used normally, the lower temperatures preferred.

A 50-gallon barrel (fig. 1), with both heads removed, or a box with tight sides, can be used for smoking small quantities of meat. Set the

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**SMOKEHOUSES**  
and  
**Hog Slaughtering**  
**Equipment**



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barrel, with head and bottom removed, over the upper end of a shallow, sloping, covered trench and dig a pit at the lower end for the fire. The heat of the fire can be controlled by covering the pit with a piece of sheet metal and mounding earth around the edges, so as to cut off most of the draft. Clean muslin or burlap hung over the top of the barrel will protect a 1-inch opening between the barrel and the cleated top, which rests on broomsticks supporting the meat.

The smokehouse illustrated in figure 3 is large enough for average farm needs and is easily constructed. The outside fire pit makes temperature control easy and reduces the fire hazard. Tight construction and well-fitted ventilators provide effective regulation of the air flow past the meat. Movable two-by-fours across the house for hanging the meat enable the operator to adjust the hangers to the size of the hams or sides of bacon being smoked. Two or more tiers of meat can be hung in the house. A taller house, holding four or more tiers of meat, can be served by the same fire pit.

The cost of the lumber and other materials for this 6- by 6- by 8-foot smokehouse will be about \$65 if they must be bought new. If

built of commercial concrete blocks the cost will be about \$85. These prices may range widely in different localities. Masonry construction reduces the fire hazard and conserves lumber needed at present for war structures. Local stone, which does not require much dressing or skill for shaping the pieces, can be used at low cash cost. Logs<sup>1</sup> are satisfactory if well fitted and chinked.

The frame type of smokehouse should not be located nearer than 50 feet to any other buildings.

A solid, frostproof foundation is essential. A concrete<sup>2</sup> floor is desirable, as it can be made both ratproof and flyproof and is more easily cleaned than wood.

A type of firebox with a removable cover (fig. 2),<sup>3</sup> can also be used for cooking picnic suppers. The smoke pipe to the house must be plugged when the firebox is used as a picnic stove. A simple earthen pit at the end of the flue could be used instead of the concrete or brick firebox shown. Also, a small wood-burning stove could be connected with the smoke pipe. In all cases it is desirable to slope the pipe slightly upward toward the outlet in the smokehouse and to cover it with earth or masonry. This covering will hold the heat and, in connection with the slope, give a more positive draft.

Ventilators should be built into the gables, as shown in figure 3; a ventilator built into the roof is rather difficult to keep watertight.

<sup>1</sup>See U. S. Department of Agriculture Farmers' Bulletin 1660, Use of Logs and Poles in Farm Construction.  
<sup>2</sup>See U. S. Department of Agriculture Farmers' Bulletin 1728, Foundations on Any Farm.  
<sup>3</sup>See U. S. Department of Agriculture Farmers' Bulletin 1869, Fireplaces and Chimneys.

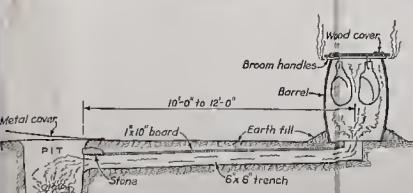


FIGURE 1.—Barrel for smoking. Stovepipe or tile, if available, could be used for the flue.

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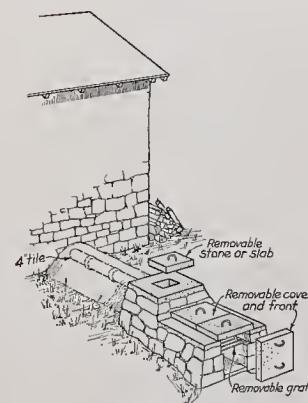
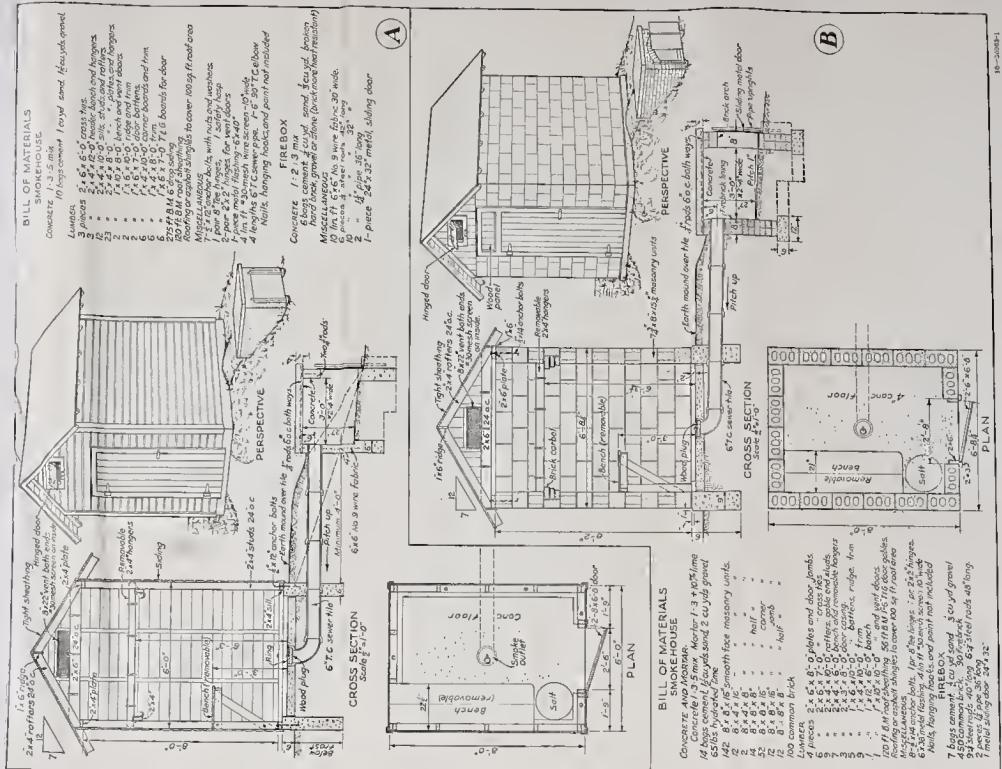


FIGURE 2.—Picnic type firebox.

Meat can be crowded into a smokehouse, the only rule being that no piece touch another or the wall. The space required varies with the weight of the cut, but 12 inches in width both ways and 2 feet in height for each piece is a fair basis for estimating the capacity of the house. Movable rails and staggered hooks will make it possible to adapt the equipment to the quantity of meat that is to be smoked.

Even well-built, fly-tight smokehouses are not safe places to store unbagged smoked meat. Ultimately flies or fly eggs will get in either on a piece of meat or when the door is opened. Smokehouses are used satisfactorily for storing meat if each piece is properly wrapped, bagged, and hung separately.





(6)

(7)

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FIGURE 4.—Burrel for scalding

## HOG SLAUGHTERING EQUIPMENT

Where only one or two moderate-sized hogs are to be killed, they may be scalded in a barrel (fig. 4). Water held at 140° to 155° F. is best for scalding; hotter water may set the bristles and make them more difficult to remove. A singletree makes an excellent gamin' stick to hang the hog on for dressing, or a 22- to 24-inch stick sharpened at both ends may be used. The gamin' bar can be hung to a tree limb or beam, or the "hobhobber" hoist

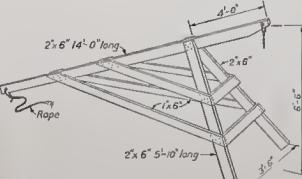


FIGURE 5.—"Hobbyhorse" hoist (courtesy Mississippi

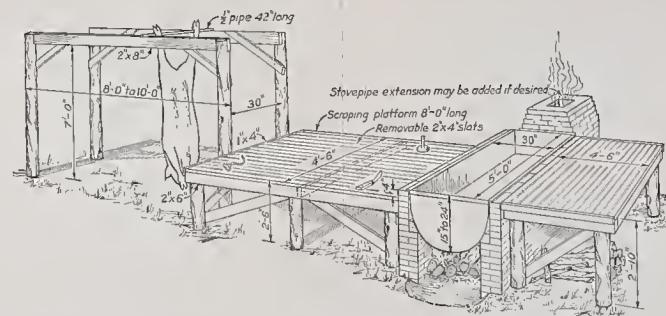


FIGURE 6.—Scalding sunfish.

(fig. 5) will provide a simple and inexpensive means for lifting as well as suspending the carcass.

Where several hogs are to be slaughtered each year, the cost of the equipment shown in figure 6 may be warranted. The essential part of this unit is a metal tank, bathtub, or half of a steel drum so supported on masonry or earth walls as to form a firebox beneath. The use of pieces of  $\frac{1}{2}$ -inch pipe,  $3\frac{1}{2}$  feet long, and gambrels will permit carcasses to be rolled easily along the dressing rails. The height and width of the equipment are standard. The length of table and rails can be adjusted to the needs.

Neither the timbers nor the surrounding ground can be cleaned thoroughly enough when such equipment is used too frequently. It is a good plan to have the vat and most of the wooden parts so mounted (fig. 7) that they can be removed, cleaned, and stored when not in use.

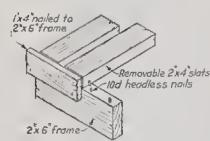


FIGURE 7.—Method of holding 2- by 4-inch

Much spoilage results from failure to chill freshly slaughtered carcasses to a temperature below 40° F. within 24 to 48 hours. Hang the meat in a cold place so that carcasses do not touch. Split the carcass or spread open the body cavity. In chilling hogs pull out the blanket of hot leaf fat and drop the head. Prompt chilling is a major part of successful curing.<sup>4</sup>

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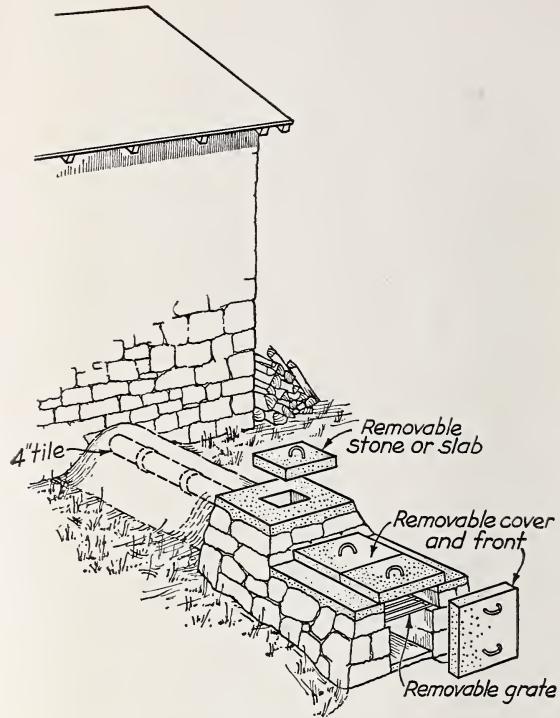


FIGURE 2.—Picnic-type firebox.

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